

SEQUENCE LISTING

<110> Boehringer Ingelheim International GmbH
<120> Method for identifying compounds that modulate sister chromatid separation
<130> 0652.2290001
<140> To be assigned
<141> Herewith
<150> EP 01 101 252.3
<151> 2001-01-19
<150> US 60/297,440
<151> 2001-06-13
<160> 8
<170> PatentIn Ver. 2.1
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 Pro Asp Arg Thr Leu Leu Lys Ile Met Leu Ser Gly Ala Gly Ala Leu
 1835 1840 1845

acc cct cag gac att cag gcc ctg gcc tac ggg ctg tgc cca acc cag 5739
 Thr Pro Gln Asp Ile Gln Ala Leu Ala Tyr Gly Leu Cys Pro Thr Gln
 1850 1855 1860 1865

cca gag cga gcc cag gag ctc ctg aat gag gca gta gga cgt cta cag 5787
 Pro Glu Arg Ala Gln Glu Leu Leu Asn Glu Ala Val Gly Arg Leu Gln
 1870 1875 1880

ggc ctg aca gta cca agc aat agc cac ctt gtc ttg gtc cta gac aag 5835
 Gly Leu Thr Val Pro Ser Asn Ser His Leu Val Leu Val Leu Asp Lys
 1885 1890 1895

gac ttg cag aag ctg ccg tgg gaa agc atg ccc agc ctc caa gca ctg 5883
 Asp Leu Gln Lys Leu Pro Trp Glu Ser Met Pro Ser Leu Gln Ala Leu
 1900 1905 1910

cct gtc acc cgg ctg ccc tcc ttc cgc ttc cta ctc agc tac tcc atc 5931
 Pro Val Thr Arg Leu Pro Ser Phe Arg Phe Leu Leu Ser Tyr Ser Ile
 1915 1920 1925

atc aaa gag tat ggg gcc tcg cca gtg ctg agt caa ggg gtg gat cca 5979
 Ile Lys Glu Tyr Gly Ala Ser Pro Val Leu Ser Gln Gly Val Asp Pro
 1930 1935 1940 1945

cga agt acc ttc tat gtc ctg aac cct cac aat aac ctg tca agc aca 6027
 Arg Ser Thr Phe Tyr Val Leu Asn Pro His Asn Asn Leu Ser Ser Thr
 1950 1955 1960

gag gag caa ttt cga gcc aat ttc agc agt gaa gct ggc tgg aga gga 6075
 Glu Glu Gln Phe Arg Ala Asn Phe Ser Ser Glu Ala Gly Trp Arg Gly
 1965 1970 1975

gtg gtt ggg gag gtg cca aga cct gaa cag gtg cag gaa gcc ctg aca 6123
 Val Val Gly Glu Val Pro Arg Pro Glu Gln Val Gln Glu Ala Leu Thr
 1980 1985 1990

aag cat gat ttg tat atc tat gca ggg cat ggg gct ggt gcc cgc ttc 6171
 Lys His Asp Leu Tyr Ile Tyr Ala Gly His Gly Ala Gly Ala Arg Phe
 1995 2000 2005

ctt gat ggg cag gct gtc ctg cgg ctg agc tgt cgg gca gtg gcc ctg 6219
 Leu Asp Gly Gln Ala Val Leu Arg Leu Ser Cys Arg Ala Val Ala Leu
 2010 2015 2020 2025

ctg ttt ggc tgt agc agt gcg gcc ctg gct gtg cat gga aac ctg gag 6267
 Leu Phe Gly Cys Ser Ser Ala Ala Leu Ala Val His Gly Asn Leu Glu
 2030 2035 2040

ggg gct ggc atc gtg ctc aag tac atc atg gct ggt tgc ccc ttg ttt 6315
 Gly Ala Gly Ile Val Leu Lys Tyr Ile Met Ala Gly Cys Pro Leu Phe
 2045 2050 2055

ctg ggt aat ctc tgg gat gtg act gac cgccgacattgaccgc tac acg 6363
 Leu Gly Asn Leu Trp Asp Val Thr Asp Arg Asp Ile Asp Arg Tyr Thr
 2060 2065 2070

gaa gct ctg ctg caa ggc tgg ctt gga gca ggc cca ggg gcc ccc ctt 6411
 Glu Ala Leu Leu Gln Gly Trp Leu Gly Ala Gly Pro Gly Ala Pro Leu
 2075 2080 2085

ctc tac tat gta aac cag gcc cgccaa gct ccc cga ctc aag tat ctt 6459
 Leu Tyr Tyr Val Asn Gln Ala Arg Gln Ala Pro Arg Leu Lys Tyr Leu
 2090 2095 2100 2105

att ggg gct gca cct ata gcc tat ggc ttg cct gtc tct ctg cgg taa 6507
 Ile Gly Ala Ala Pro Ile Ala Tyr Gly Leu Pro Val Ser Leu Arg
 2110 2115 2120

ccccatggag ctgtcttatt gatgctagaa gcctcataac tgttctacct ccaaggtag 6567
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 tcctttgat ttaacctcag tataataaaag atacatcatt t 6668

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Lys Glu Ala Glu Glu Leu Leu Pro Asp Leu Lys Glu Phe Leu Ser Asn
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Pro Pro Ala Gly Phe Pro Ser Ser Arg Ser Asp Ala Glu Arg Arg Gln
 35 40 45

Ala Cys Asp Ala Ile Leu Arg Ala Cys Asn Gln Gln Leu Thr Ala Lys
 50 55 60

Leu Ala Cys Pro Arg His Leu Gly Ser Leu Leu Glu Leu Ala Glu Leu
 65 70 75 80

Ala Cys Asp Gly Tyr Leu Val Ser Thr Pro Gln Arg Pro Pro Leu Tyr
 85 90 95

Leu Glu Arg Ile Leu Phe Val Leu Leu Arg Asn Ala Ala Gln Gly
 100 105 110

Ser Pro Glu Val Thr Leu Arg Leu Ala Gln Pro Leu His Ala Cys Leu
 115 120 125

Val Gln Cys Ser Arg Glu Ala Ala Pro Gln Asp Tyr Glu Ala Val Ala
 130 135 140

Arg Gly Ser Phe Ser Leu Leu Trp Lys Gly Ala Glu Ala Leu Leu Glu
 145 150 155 160

Arg Arg Ala Ala Phe Ala Ala Arg Leu Lys Ala Leu Ser Phe Leu Val
 165 170 175

Leu Leu Glu Asp Glu Ser Thr Pro Cys Glu Val Pro His Phe Ala Ser
 180 185 190

Pro Thr Ala Cys Arg Ala Val Ala Ala His Gln Leu Phe Asp Ala Ser
 195 200 205

Gly His Gly Leu Asn Glu Ala Asp Ala Asp Phe Leu Asp Asp Leu Leu
 210 215 220

Ser Arg His Val Ile Arg Ala Leu Val Gly Glu Arg Gly Ser Ser Ser
 225 230 235 240

Gly Leu Leu Ser Pro Gln Arg Ala Leu Cys Leu Leu Glu Leu Thr Leu
 245 250 255

Glu His Cys Arg Arg Phe Cys Trp Ser Arg His His Asp Lys Ala Ile
 260 265 270

Ser Ala Val Glu Lys Ala His Ser Tyr Leu Arg Asn Thr Asn Leu Ala
 275 280 285

Pro Ser Leu Gln Leu Cys Gln Leu Gly Val Lys Leu Leu Gln Val Gly
 290 295 300

Glu Glu Gly Pro Gln Ala Val Ala Lys Leu Leu Ile Lys Ala Ser Ala
 305 310 315 320

Val Leu Ser Lys Ser Met Glu Ala Pro Ser Pro Pro Leu Arg Ala Leu
 325 330 335

Tyr Glu Ser Cys Gln Phe Phe Leu Ser Gly Leu Glu Arg Gly Thr Lys
 340 345 350

Arg Arg Tyr Arg Leu Asp Ala Ile Leu Ser Leu Phe Ala Phe Leu Gly
 355 360 365

Gly Tyr Cys Ser Leu Leu Gln Gln Leu Arg Asp Asp Gly Val Tyr Gly
 370 375 380

Gly Ser Ser Lys Gln Gln Ser Phe Leu Gln Met Tyr Phe Gln Gly
 385 390 395 400

Leu His Leu Tyr Thr Val Val Val Tyr Asp Phe Ala Gln Gly Cys Gln
 405 410 415

Ile Val Asp Leu Ala Asp Leu Thr Gln Leu Val Asp Ser Cys Lys Ser
 420 425 430

Thr Val Val Trp Met Leu Glu Ala Leu Glu Gly Leu Ser Gly Gln Glu
 435 440 445

Leu Thr Asp His Met Gly Met Thr Ala Ser Tyr Thr Ser Asn Leu Ala
 450 455 460

Tyr Ser Phe Tyr Ser His Lys Leu Tyr Ala Glu Ala Cys Ala Ile Ser
 465 470 475 480

Glu Pro Leu Cys Gln His Leu Gly Leu Val Lys Pro Gly Thr Tyr Pro
 485 490 495

Glu Val Pro Pro Glu Lys Leu His Arg Cys Phe Arg Leu Gln Val Glu
 500 505 510

Ser Leu Lys Lys Leu Gly Lys Gln Ala Gln Gly Cys Lys Met Val Ile
 515 520 525

Leu Trp Leu Ala Ala Leu Gln Pro Cys Ser Pro Glu His Met Ala Glu
 530 535 540

Pro Val Thr Phe Trp Val Arg Val Lys Met Asp Ala Ala Arg Ala Gly
 545 550 555 560

Asp Lys Glu Leu Gln Leu Lys Thr Leu Arg Asp Ser Leu Ser Gly Trp
 565 570 575

Asp Pro Glu Thr Leu Ala Leu Leu Arg Glu Glu Leu Gln Ala Tyr
 580 585 590

Lys Ala Val Arg Ala Asp Thr Gly Gln Glu Arg Phe Asn Ile Ile Cys
 595 600 605

Asp Leu Leu Glu Leu Ser Pro Glu Glu Thr Pro Ala Gly Ala Trp Ala
 610 615 620

Arg Ala Thr His Leu Val Glu Leu Ala Gln Val Leu Cys Tyr His Asp
 625 630 635 640

Phe Thr Gln Gln Thr Asn Cys Ser Ala Leu Asp Ala Ile Arg Glu Ala
 645 650 655

Leu Gln Leu Leu Asp Ser Val Arg Pro Glu Ala Gln Ala Arg Asp Gln
 660 665 670

Leu Leu Asp Asp Lys Ala Gln Ala Leu Leu Trp Leu Tyr Ile Cys Thr
 675 680 685

Leu Glu Ala Lys Ile Gln Glu Gly Ile Glu Arg Asp Arg Arg Ala Gln
 690 695 700

Ala Pro Gly Asn Leu Glu Glu Phe Glu Val Asn Asp Leu Asn Tyr Glu
 705 710 715 720

Asp Lys Leu Gln Glu Asp Arg Phe Leu Tyr Ser Asn Ile Ala Phe Asn
 725 730 735

Leu Ala Ala Asp Ala Ala Gln Ser Lys Cys Leu Asp Gln Ala Leu Ala
 740 745 750

Leu Trp Lys Glu Leu Leu Thr Lys Gly Gln Ala Pro Ala Val Arg Cys
 755 760 765

Leu Gln Gln Thr Ala Ala Ser Leu Gln Ile Leu Ala Ala Leu Tyr Gln
 770 775 780

Leu Val Ala Lys Pro Met Gln Ala Leu Glu Val Leu Leu Leu Leu Arg
 785 790 795 800

Ile Val Ser Glu Arg Leu Lys Asp His Ser Lys Ala Ala Gly Ser Ser
 805 810 815

Cys His Ile Thr Gln Leu Leu Leu Thr Leu Gly Cys Pro Ser Tyr Ala
 820 825 830

Gln Leu His Leu Glu Glu Ala Ala Ser Ser Leu Lys His Leu Asp Gln

835

840

845

Thr Thr Asp Thr Tyr Leu Leu Leu Ser Leu Thr Cys Asp Leu Leu Arg
 850 855 860

Ser Gln Leu Tyr Trp Thr His Gln Lys Val Thr Lys Gly Val Ser Leu
 865 870 875 880

Leu Leu Ser Val Leu Arg Asp Pro Ala Leu Gln Lys Ser Ser Lys Ala
 885 890 895

Trp Tyr Leu Leu Arg Val Gln Val Leu Gln Leu Val Ala Ala Tyr Leu
 900 905 910

Ser Leu Pro Ser Asn Asn Leu Ser His Ser Leu Trp Glu Gln Leu Cys
 915 920 925

Ala Gln Gly Trp Gln Thr Pro Glu Ile Ala Leu Ile Asp Ser His Lys
 930 935 940

Leu Leu Arg Ser Ile Ile Leu Leu Leu Met Gly Ser Asp Ile Leu Ser
 945 950 955 960

Thr Gln Lys Ala Ala Val Glu Thr Ser Phe Leu Asp Tyr Gly Glu Asn
 965 970 975

Leu Val Gln Lys Trp Gln Val Leu Ser Glu Val Leu Ser Cys Ser Glu
 980 985 990

Lys Leu Val Cys His Leu Gly Arg Leu Gly Ser Val Ser Glu Ala Lys
 995 1000 1005

Ala Phe Cys Leu Glu Ala Leu Lys Leu Thr Thr Lys Leu Gln Ile Pro
 1010 1015 1020

Arg Gln Cys Ala Leu Phe Leu Val Leu Lys Gly Glu Leu Glu Leu Ala
 1025 1030 1035 1040

Arg Asn Asp Ile Asp Leu Cys Gln Ser Asp Leu Gln Gln Val Leu Phe
 1045 1050 1055

Leu Leu Glu Ser Cys Thr Glu Phe Gly Gly Val Thr Gln His Leu Asp
 1060 1065 1070

Ser Val Lys Lys Val His Leu Gln Lys Gly Lys Gln Gln Ala Gln Val
 1075 1080 1085

Pro Cys Pro Pro Gln Leu Pro Glu Glu Glu Leu Phe Leu Arg Gly Pro
 1090 1095 1100

Ala Leu Glu Leu Val Ala Thr Val Ala Lys Glu Pro Gly Pro Ile Ala
 1105 1110 1115 1120

Pro Ser Thr Asn Ser Ser Pro Val Leu Lys Thr Lys Pro Gln Pro Ile
 1125 1130 1135

Pro Asn Phe Leu Ser His Ser Pro Thr Cys Asp Cys Ser Leu Cys Ala
 1140 1145 1150

Ser Pro Val Leu Thr Ala Val Cys Leu Arg Trp Val Leu Val Thr Ala
 1155 1160 1165

Gly Val Arg Leu Ala Met Gly His Gln Ala Gln Gly Leu Asp Leu Leu
 1170 1175 1180

Gln Val Val Leu Lys Gly Cys Pro Glu Ala Ala Glu Arg Leu Thr Gln
 1185 1190 1195 1200

Ala Leu Gln Ala Ser Leu Asn His Lys Thr Pro Pro Ser Leu Val Pro
 1205 1210 1215

Ser Leu Leu Asp Glu Ile Leu Ala Gln Ala Tyr Thr Leu Leu Ala Leu
 1220 1225 1230

Glu Gly Leu Asn Gln Pro Ser Asn Glu Ser Leu Gln Lys Val Leu Gln
 1235 1240 1245

Ser Gly Leu Lys Phe Val Ala Ala Arg Ile Pro His Leu Glu Pro Trp
 1250 1255 1260

Arg Ala Ser Leu Leu Leu Ile Trp Ala Leu Thr Lys Leu Gly Gly Leu
 1265 1270 1275 1280

Ser Cys Cys Thr Thr Gln Leu Phe Ala Ser Ser Trp Gly Trp Gln Pro
 1285 1290 1295

Pro Leu Ile Lys Ser Val Pro Gly Ser Glu Pro Ser Lys Thr Gln Gly
 1300 1305 1310

Gln Lys Arg Ser Gly Arg Gly Arg Gln Lys Leu Ala Ser Ala Pro Leu
 1315 1320 1325

Ser Leu Asn Asn Thr Ser Gln Lys Gly Leu Glu Gly Arg Gly Leu Pro
 1330 1335 1340

Cys Thr Pro Lys Pro Pro Asp Arg Ile Arg Gln Ala Gly Pro His Val
 1345 1350 1355 1360

Pro Phe Thr Val Phe Glu Glu Val Cys Pro Thr Glu Ser Lys Pro Glu
 1365 1370 1375

Val Pro Gln Ala Pro Arg Val Gln Gln Arg Val Gln Thr Arg Leu Lys
 1380 1385 1390

Val Asn Phe Ser Asp Asp Ser Asp Leu Glu Asp Pro Val Ser Ala Glu
 1395 1400 1405

Ala Trp Leu Ala Glu Glu Pro Lys Arg Arg Gly Thr Ala Ser Arg Gly
 1410 1415 1420

Arg Gly Arg Ala Arg Lys Gly Leu Ser Leu Lys Thr Asp Ala Val Val
 1425 1430 1435 1440

Ala Pro Gly Ser Ala Pro Gly Asn Pro Gly Leu Asn Gly Arg Ser Arg
 1445 1450 1455

Arg Ala Lys Lys Val Ala Ser Arg His Cys Glu Glu Arg Arg Pro Gln
 1460 1465 1470

Arg Ala Ser Asp Gln Ala Arg Pro Gly Pro Glu Ile Met Arg Thr Ile
 1475 1480 1485

Pro Glu Glu Glu Leu Thr Asp Asn Trp Arg Lys Met Ser Phe Glu Ile
 1490 1495 1500

Leu Arg Gly Ser Asp Gly Glu Asp Ser Ala Ser Gly Gly Lys Thr Pro
 1505 1510 1515 1520
 Ala Pro Gly Pro Glu Ala Ala Ser Gly Glu Trp Glu Leu Leu Arg Leu
 1525 1530 1535
 Asp Ser Ser Lys Lys Leu Pro Ser Pro Cys Pro Asp Lys Glu Ser
 1540 1545 1550
 Asp Lys Asp Leu Gly Pro Arg Leu Gln Leu Pro Ser Ala Pro Val Ala
 1555 1560 1565
 Thr Gly Leu Ser Thr Leu Asp Ser Ile Cys Asp Ser Leu Ser Val Ala
 1570 1575 1580
 Phe Arg Gly Ile Ser His Cys Pro Pro Ser Gly Leu Tyr Ala His Leu
 1585 1590 1595 1600
 Cys Arg Phe Leu Ala Leu Cys Leu Gly His Arg Asp Pro Tyr Ala Thr
 1605 1610 1615
 Ala Phe Leu Val Thr Glu Ser Val Ser Ile Thr Cys Arg His Gln Leu
 1620 1625 1630
 Leu Thr His Leu His Arg Gln Leu Ser Lys Ala Gln Lys His Arg Gly
 1635 1640 1645
 Ser Leu Glu Ile Ala Asp Gln Leu Gln Gly Leu Ser Leu Gln Glu Met
 1650 1655 1660
 Pro Gly Asp Val Pro Leu Ala Arg Ile Gln Arg Leu Phe Ser Phe Arg
 1665 1670 1675 1680
 Ala Leu Glu Ser Gly His Phe Pro Gln Pro Glu Lys Glu Ser Phe Gln
 1685 1690 1695
 Glu Arg Leu Ala Leu Ile Pro Ser Gly Val Thr Val Cys Val Leu Ala
 1700 1705 1710
 Leu Ala Thr Leu Gln Pro Gly Thr Val Gly Asn Thr Leu Leu Thr
 1715 1720 1725
 Arg Leu Glu Lys Asp Ser Pro Pro Val Ser Val Gln Ile Pro Thr Gly
 1730 1735 1740
 Gln Asn Lys Leu His Leu Arg Ser Val Leu Asn Glu Phe Asp Ala Ile
 1745 1750 1755 1760
 Gln Lys Ala Gln Lys Glu Asn Ser Ser Cys Thr Asp Lys Arg Glu Trp
 1765 1770 1775
 Trp Thr Gly Arg Leu Ala Leu Asp His Arg Met Glu Val Leu Ile Ala
 1780 1785 1790
 Ser Leu Glu Lys Ser Val Leu Gly Cys Trp Lys Gly Leu Leu Leu Pro
 1795 1800 1805
 Ser Ser Glu Glu Pro Gly Pro Ala Gln Glu Ala Ser Arg Leu Gln Glu
 1810 1815 1820
 Leu Leu Gln Asp Cys Gly Trp Lys Tyr Pro Asp Arg Thr Leu Leu Lys
 1825 1830 1835 1840

Ile Met Leu Ser Gly Ala Gly Ala Leu Thr Pro Gln Asp Ile Gln Ala
 1845 1850 1855

Leu Ala Tyr Gly Leu Cys Pro Thr Gln Pro Glu Arg Ala Gln Glu Leu
 1860 1865 1870

Leu Asn Glu Ala Val Gly Arg Leu Gln Gly Leu Thr Val Pro Ser Asn
 1875 1880 1885

Ser His Leu Val Leu Val Leu Asp Lys Asp Leu Gln Lys Leu Pro Trp
 1890 1895 1900

Glu Ser Met Pro Ser Leu Gln Ala Leu Pro Val Thr Arg Leu Pro Ser
 1905 1910 1915 1920

Phe Arg Phe Leu Leu Ser Tyr Ser Ile Ile Lys Glu Tyr Gly Ala Ser
 1925 1930 1935

Pro Val Leu Ser Gln Gly Val Asp Pro Arg Ser Thr Phe Tyr Val Leu
 1940 1945 1950

Asn Pro His Asn Asn Leu Ser Ser Thr Glu Glu Gln Phe Arg Ala Asn
 1955 1960 1965

Phe Ser Ser Glu Ala Gly Trp Arg Gly Val Val Gly Glu Val Pro Arg
 1970 1975 1980

Pro Glu Gln Val Gln Glu Ala Leu Thr Lys His Asp Leu Tyr Ile Tyr
 1985 1990 1995 2000

Ala Gly His Gly Ala Gly Ala Arg Phe Leu Asp Gly Gln Ala Val Leu
 2005 2010 2015

Arg Leu Ser Cys Arg Ala Val Ala Leu Leu Phe Gly Cys Ser Ser Ala
 2020 2025 2030

Ala Leu Ala Val His Gly Asn Leu Glu Gly Ala Gly Ile Val Leu Lys
 2035 2040 2045

Tyr Ile Met Ala Gly Cys Pro Leu Phe Leu Gly Asn Leu Trp Asp Val
 2050 2055 2060

Thr Asp Arg Asp Ile Asp Arg Tyr Thr Glu Ala Leu Leu Gln Gly Trp
 2065 2070 2075 2080

Leu Gly Ala Gly Pro Gly Ala Pro Leu Leu Tyr Tyr Val Asn Gln Ala
 2085 2090 2095

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2100 2105 2110
Tyr Gly Leu Pro Val Ser Leu Arg
2115 2120

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: primer

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